

Glossary of Terms

Carbon is confusing: not only is it in almost everything at different amounts, but scientists and marketers have perhaps not been kind to us in explanations of what these amounts and different terminologies mean. We've put this guide together to help you understand - as simply as possible - what some of the key carbon-related terms mean.

Headline Terms

Carbon Neutral - *"I have done a high-level guess of my footprint and have bought offsets yearly to cover those emissions."* - Not to be confused with a carbon-neutral product which is when only a shoe, watch or whatever you are trying to sell has its emissions offset rather than the whole business.

Climate Positive - *"I want to do better than just be carbon neutral so I will spend a little more on some more offsets"*

Carbon Negative - *see climate positive

Carbon Positive - No idea, it must be a typo, you probably mean carbon negative or climate positive. But who knows?

Science Based Targets - *"We accurately measure our emissions and then aim to reduce them year on year in line with limiting the world to a 1.5-degree temperature increase"*. Kudos to anyone doing this.

Zero Carbon - You have no carbon footprint whatsoever. Bravo!

Net Zero - *"We report on all our emissions, try to reduce them as much as possible, and then—we invest in projects that either prevent emissions elsewhere or pull carbon out of the air to reach a “net-zero” balance on paper."* **The one you should be aiming for** (it is a bit like if Carbon Neutral and Science-Based Targets had a baby).

Carbon Calculations & Reporting

For most day to day conversations, you should never need these, however, if you are communicating with others who want the gory details about your carbon footprint, these terms may come in handy.

Scopes - When calculating your carbon footprint, for reporting purposes your emissions will be assigned into 3 categories (Scope 1, 2 & 3). Scope 1 being the emissions you have the most control over and Scope 3 being the least.

(The below terms are a tad more complicated than our couple of sentences may suggest, there are 50-page reports defining what they mean, so take these summaries with a pinch of salt).

Scope 1 - These are emissions from all the fuel that you pay for. Pay for petrol in your company car or have a diesel generator at your site, they will all be scope 1.

Scope 2 - All the emissions from the electricity you pay for at your premises. Pay for electricity at your office? Stick it in your scope 2 emissions.

Scope 3 - Everything else that forms part of your company emissions. These often are things you cannot control but can influence (also known as 'indirect'). For example, if you work from home, your electricity emissions from this activity will sit in scope 3 as you personally pay for it, rather than the company. Your website emissions, business travel, your whole supply chain, we could go on but they all sit within Scope 3. For most businesses, this is by far the biggest section of their footprint.

It is mandatory to include scope 1 and 2 emissions in your reporting, best practice is to include scope 3 emissions too.

GHG - Gases that trap heat in the atmosphere are called greenhouse gases. Typically these are carbon dioxide, Nitrous Oxide and methane but there are more.

Carbon Dioxide Equivalent (CO₂e) - this is a term for describing the size of all greenhouse gases combined. So rather than saying your footprint is 10kg of carbon dioxide + 10kg of methane and 10 kg of Nitrous Oxide, we can say 30kg of CO₂e to combine them all together. *(These sums have been simplified)*

Decarbonisation - this is the process of reducing our GHG emissions/ carbon footprint. It is something we (people, governments, countries & businesses) all need to start doing. It will lower our reliance on fossil fuels to live our everyday lives.

Carbon Budget - The number of greenhouse gases that humanity “is allowed” to emit into the atmosphere in order to reach the 1.5°C target of the Paris Climate Convention.

Absolute Target - “we are going to reduce our carbon footprint by 50% so that the total amount of emissions we create will be halved, no matter if we grow as a business.”

Intensity Target - “We are going to reduce our carbon footprint by 50% per employee (or per item sold).” The actual footprint may still increase if they have 3x as many employees or sell way more stuff. Intensity targets play a large role in redesigning products to have no emissions in them.

Reducing emissions through Sustainable Aviation Fuels

As part of our reduction strategy, we will invest in Sustainable Aviation Fuels (SAF) to reduce the emissions of our travel footprint.

Sustainable aviation fuels (SAF) - Represents one of the most effective and viable jet fuel alternatives for aviation available today¹. They can be safely used in **existing aircrafts** and can achieve at least **80% CO2 emissions reduction** compared to conventional jet fuel².

Why aren't all planes flying on SAF then? - For SAF to drive forward the decarbonisation of the sector in the necessary timeframe, both the supply and demand will need to be rapidly scaled. Currently, SAF production accounts for less than 0.05% of global jet fuel demand³ and production costs are approximately two to three times more than jet fuel⁴. **Consistent and stable policy environments** must be established which encourage significant increased investment to build more factories and thus accelerate production. Once the supply of SAF grows, industry-wide adoption will need to follow. To achieve this, consumer pressure and policy change to mandate their use will be vital.

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<https://www.ipcc.ch/2018/10/08/summary-for-policymakers-of-ipcc-special-report-on-global-warming-of-1-5c-approved-by-governments/>

² <https://skynrg.com/sustainable-aviation-fuel/saf/>

³ <https://theicct.org/sites/default/files/publications/Sustainable-aviation-fuel-feedstock-eu-mar2021.pdf>

⁴ <https://www.unep.org/emissions-gap-report-2020>

Offsetting Terms & Types

Carbon Credit - If you want to offset 10 tonnes of CO₂e, you will need to buy 10 carbon credits. 1 carbon credit is always equal to 1 tonne of CO₂e. It is just a generic term created to make buying offsets from different companies easier.

Per tonne (p/tonne) - If the phrase carbon credit is not used, this might be used instead. When we measure your carbon footprint, we calculate it in kilograms or tonnes. (1000 kilograms = 1 tonne). The price of the offset will be given to you in 'per tonne' and you always round up your emissions to the nearest tonne when purchasing offsets. (Be careful not to mix tons and tonnes, although similar they are different amounts. A metric ton is the same as a tonne though just to make it even more confusing).

Carbon Offsets - An offset is generated by an activity that either prevents the release of, reduces, or removes GHG emissions from the atmosphere. Traditional offset projects pay others not to pollute. For example, you can pay for cookstoves to prevent more destruction of forests. These are also known as carbon avoidance projects. (This is what most people do)

Carbon removal - Another type of carbon offset. To get to zero carbon, it's not enough to avoid emissions. We need to remove the GHG emissions that remain in the atmosphere. There are two paths: "natural" solutions that sequester carbon such as trees and new technologies like direct air capture. We need both but they're expensive and small-scale today. Companies can and are playing a crucial role in changing that. (This is what eco!llective do)

Types of Carbon Removal:

Direct Air Capture - Direct Air Capture uses large fan-like machines to pull CO₂ directly out of the atmosphere. Captured CO₂ can either be stored permanently in rock formations underneath the earth's surface or reused for other materials.

Biochar - Heating waste biomass to high temperatures without oxygen turns it into carbon-rich biochar. Applied to soils, biochar is great for storing carbon for a long time while simultaneously increasing agricultural productivity.

Soil Sequestration - Soils are great at capturing carbon, but the overuse of soils over the past decades has reduced their ability to do so. Diverse techniques can optimize and help regain the carbon-capturing properties of soils.

Forestation - Trees are the earth's natural carbon removal machines. Trees sequester CO₂ and store it in every part of the tree. A single tree can capture up to a ton of CO₂ in its lifetime.